



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,647	10/31/2003	Muneki Hamashima	032082	8467

38834 7590 03/06/2006

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

TRAN, THUY V

ART UNIT	PAPER NUMBER
----------	--------------

2821

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,647

Applicant(s)

HAMASHIMA ET AL.

Examiner

Thuy V. Tran

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 12/15/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This is a response to the Applicants' amendment submitted on 12/15/2005. In virtue of this amendment, claim 12 has been canceled; and thus, claims 1-11 are now presented in the instant application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

2. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (U.S. Patent No. 6,038,018).

With respect to claim 11, Yamazaki et al. discloses, in Fig. 9, an electron beam apparatus for directing a plurality of primary electron beams [31] (see col. 6, line 2) onto a sample [11] comprising (1) an objective lens [14] for forming an electric field to accelerate a plurality of secondary electron beams [32] emitted from said sample [11] (see col. 6, lines 1-10), (2) a separator [27] for separating said plurality of secondary electron beams from a primary optical system (which includes lens [5, 6]), (3) a director [46] for directing said plurality of secondary electron beams into a secondary optical system (see col. 10, lines 46-55) for guiding to a detector [61, 62] outputting a detection signal of the secondary electron beams, wherein the electric field is controlled (via power source [15]; see col. 6, lines 43-45) so that the secondary electron beams [32] are emitted at a large angle to the normal of the sample surface are also converged into fine secondary electron beams (the two lines representing the secondary electron beams are normal to

Art Unit: 2821

the sample surface seemingly at a large angle of substantially 90 degrees and converged into fine secondary beams between [16] and [18]; see Fig. 9).

Allowable Subject Matter

3. Claims 1-10 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- An electron beam apparatus comprising a deflector for deflecting said secondary electron beams in said secondary optical system wherein said deflector is controlled to deflect said plurality of secondary electron beams to prevent said plurality of secondary electron beams from moving on said detector in response to the scanning of said plurality of primary electron beams, in combination with the remaining claimed limitations as called for in independent claim 1 (claims 2 and 4 are allowed since they are dependent on claim 1);
- An electron beam apparatus further comprising a number of memories twice as much as a number of the detectors for storing digital signals generated by A/D converting the detection signals, and change-over switches disposed in front of and at a back of the memories, in combination with the remaining claimed limitations as called for in independent claim 3;
- An electron beams apparatus wherein said Wehnelt electrode comprises a first portion adjacent to said cathode electrode and a second portion separated from said first portion, said first portion being finely movable in an x-direction, a y-direction, or a z - direction orthogonal to one another, in combination with the remaining claimed

Art Unit: 2821

limitations as called for in independent claim 5 (claims 6-9 are allowed since they are dependent on claim 5); and

- An electron beam apparatus comprising a condenser lens for converging the plurality of primary electron beams emitted from said electron gun, a multi-aperture plate having a plurality of apertures, a demagnification lens for demagnifying the plurality of primary electron beams, wherein said condenser lens forms a crossover image at a point between said multi-aperture plate and said demagnification lens, in combination with the remaining claimed limitations as called for in independent claim 10.

Remarks and conclusion

5. Applicants' arguments, see pages 7 and 8 of the Amendment, filed 12/15/2005, with respect to amended claims 1 and 10, have been fully considered and are persuasive. The rejections of claims 1 and 10 have been withdrawn. Since none of the prior art of record teaches all the limitations recited in claims 1 and 10, claim 1 and its dependent claims 2 and 4, and claim 10 are now allowed.

6. Applicant's arguments at page 8 of the amendment filed 12/15/2005 with respect to amended claim 11 have been fully considered but they are not persuasive. The cited reference to Yamazaki et al. discloses, in Fig. 9, all the limitations recited in the amended claim 11 as clearly addressed above. Therefore, claim 11 remains rejected as being anticipated by the teachings of Yamazaki et al..

7. Claim 4 has been allowed as it depends on claim 1. Therefore, no response is necessary to Applicants' arguments at page 8 of the amendment with respect to the rejection of this claim.

8. Conclusively, claims 1-10 are now allowed.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

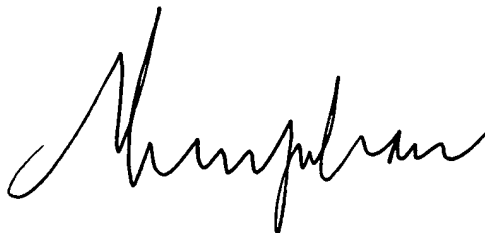
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2821

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

03/01/2006

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', written in a cursive style.

THUY V. TRAN
PRIMARY EXAMINER